WHAT IS CLAIMED IS:

1. A method for grouping a plurality of training symbols into a plurality of training symbol groups to perform channel estimation corresponding to at least two transmission antennas, loading individual training symbols contained in the training symbol groups on sub-carriers, and transmitting the training symbols loaded on the sub-carriers in an OFDM (Orthogonal Frequency Division Multiplexing) system for transmitting data using the at least two transmission antennas, comprising the steps of:

a) creating the plurality of training symbol groups; and

b) transmitting the received training symbol groups only once using one transmission antenna from among the at least two transmission antennas at predetermined time intervals.

2. The method as set forth in claim 1, wherein the plurality of training symbol groups are simultaneously transmitted in a non-overlapping pattern by a number of transmission antennas equal to a number of the training symbol groups.

3. The method as set forth in claim 2, wherein the plurality of training symbol groups are sequentially allocated to the at least two transmission antennas.

4. The method as set forth in claim 1, wherein the training symbols are grouped into the training symbol groups by:

$$x_i^p = \begin{cases} c_i & i=(m-1)N_t + p \\ 0 & otherwise \end{cases}$$

$$0 \le p \le N_t - 1, \quad 1 \le i \le N_c N_t$$

where x_i^p is a training symbol included in the p^th training symbol group, N_t is the number of antennas or the number of training symbol groups, c_i is an arbitrary

complex of a magnitude $\sqrt{N_t}$, m is an integer lower than N_c, and N_c is number of training symbols allocated to one transmission antenna.

5. The method as set forth in claim 1, wherein each of the at least two transmission antennas transmits a training symbol allocated only once when transmitting a specific sub-carrier a predetermined number of times equal to a number of the at least two transmission antennas.

6. A method for performing channel estimation using received sub-carriers in an OFDM (Orthogonal Frequency Division Multiplexing) system for receiving a first sub-carrier having a training symbol and a second sub-carrier having no training symbol, comprising the steps of:

a) setting a first weight associated with a reliability of the first sub-carrier and a second weight associated with a reliability of the second sub-carrier, said first weight being different from said second weight;

b) measuring channel estimation errors associated with individual received sub-carriers; and

c) performing channel estimation using the measured channel estimation errors and the set weights.

7. The method as set forth in claim 6, wherein the first weight associated with the first sub-carrier is higher than the second weight associated with the second sub-carrier.

8. The method as set forth in claim 6, wherein the channel estimation errors associated with individual sub-carriers that are transmitted from at least two transmission antennas are measured when the sub-carriers are received from the at least two transmission antennas.

9. The method as set forth in claim 6, wherein the channel estimation errors are measured irrespective of influences of noise occurring individual channels for transmitting the sub-carriers.

10. An apparatus for grouping a plurality of training symbols into a plurality of training symbol groups to perform channel estimation corresponding to at least two transmission antennas, loading individual training symbols contained in the training symbol groups on sub-carriers, and transmitting the training symbols loaded on the sub-carriers in an OFDM (Orthogonal Frequency Division Multiplexing) system for transmitting data using the at least two transmission antennas, comprising:

a distributor for distributing the received training symbol groups only once using one transmission antenna from among the at least two transmission antennas at predetermined time intervals; and

the at least two transmission antennas for transmitting the training symbol groups received from the distributor.

11. The apparatus as set forth in claim 10, wherein the plurality of training symbol groups distributed from the distributor are simultaneously transmitted to be non-overlapping with each other by the at least two transmission antennas whose number is equal to a number of the training symbol groups.

12. The apparatus as set forth in claim 11, wherein the distributor sequentially allocates the plurality of training symbols to the at least two transmission antennas to create the training symbol groups, and receives the training symbol groups.

13. The apparatus as set forth in claim 10, wherein the distributor controls the training symbols to receive the training symbol groups

$$x_i^p = \begin{cases} c_i & i=(m-1)N_t+p \\ 0 & otherwise \end{cases}$$

$$0 \leq \quad p \leq \quad N_t - 1, \quad 1 \leq \quad i \leq N_c N_t$$

where x_i^p is a training symbol included in the p^{th} training symbol group, N_t is the number of antennas or the number of training symbol groups, c_i is an arbitrary complex of a magnitude $\sqrt{N_t}$, m is an integer lower than N_c, and N_c is number of training symbols allocated to one transmission antenna.

14. The apparatus as set forth in claim 10, wherein each of the transmission antennas transmits a training symbol allocated only once when transmitting a specific sub-carrier a predetermined number of times equal to the number of the transmission antennas.

15. An apparatus for performing channel estimation using received sub-carriers in an OFDM (Orthogonal Frequency Division Multiplexing) system for receiving a first sub-carrier having a training symbol and second sub-carrier having no training symbol, comprising:

at least one reception antenna for receiving the sub-carriers, and transmitting the received sub-carriers; and a channel estimator for setting a first weight associated with a reliability of the first sub-carrier and a second weight associated with a reliability of the second sub-carrier, measuring channel estimation errors associated with individual received sub-carriers, and performing channel estimation using the measured channel estimation errors and the set weights.

16. The apparatus as set forth in claim 15, wherein the channel estimator sets the first weight associated with the first sub-carrier to be higher than the second weight associated with the second sub-carrier.

17. The apparatus as set forth in claim 15, wherein the channel estimator measures the channel estimation errors associated with the individual sub-carriers

transmitted from at least two transmission antennas when the sub-carriers are received from the at least two transmission antennas.

18. The apparatus as set forth in claim 15, wherein the channel estimator measures the channel estimation errors irrespective of an influence of noise occurring in individual channels for transmitting the sub-carriers.